DOCUMENT RESUME

ED 128 696 CG 010 802

AUTHOR Lynn, Cheryl W.; Mullen, Gail S.
TITLE Investigation of the Relationship of Affective Characteristics and Cognitive Skills to the Maintenance of Grade Level in a Statewide Needs Assessment.
PUB DATE [76]
NOTE 45p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, California, April 19-23, 1976); the great majority of the pages in this document have been filmed sideways to maintain the integrity of the tables.

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS Academic Ability; *Academic Achievement; *Affective Tests; *Cognitive Tests; *Comparative Analysis; Educational Research; Longitudinal Studies; Secondary Education; *Self Concept; Statistical Data; *Student Evaluation

ABSTRACT

This paper summarizes a longitudinal study which analyzes cognitive performance and affective characteristics of students in relation to their maintenance of grade level. The SRA Achievement and Thorndike-Lorge Intelligence instruments were used in the 1969-70 cognitive testing of seventh-grade students. Comparable testing of these students in 1974 used SCAT and STEP tests. Both the 1969-70 and 1974-75 testings included the Virginia Affective Assessment Questionnaire. This instrument is composed of four subscales which include self-concept, citizenship, school participation and concept of self to others. After the 1974-75 testing, a subgroup of students who had not achieved the grade level of their peers was identified and compared with a randomly selected control group of their peers. Analyses of variance indicate that students who dropped behind grade level did not differ in ability from those who stayed at grade level, but did differ in the seventh grade in achievement. By twelfth grade, their achievement scores were still lower, and they showed marked deficiencies in writing performance and spelling. Their attitudes were also considered to be poorer in general. The major portion of this document consists of data tables. (SJL)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED128696

"Investigation of the Relationship of Affective Characteristics and Cognitive Skills to Maintenance of Grade Level in a Statewide Needs Assessment"

Cheryl W. Lynn
P.O. Box 3754
Charlottesville, Virginia
22903

CHERYL W. LYNN, University of Virginia
GAIL S. MULLEN, University of Virginia

During the 1969-70 school year, approximately 8000 seventh-graders in the Virginia public school system were administered a battery of instruments as part of a statewide Needs Assessment Project. Some 4000 of these students were successfully followed and retested in 1974-75. The availability of subjects for retesting and consistency of the instruments used have made possible several longitudinal analyses of the data. One such is an analysis of cognitive performance and affective characteristics in relation to maintenance of grade level.

The SRA Achievement and Thorndike-Lorge Intelligence instruments were used in the 1969-70 cognitive testing which included reading, mathematics, social studies, science, language arts, work study skills, and general aptitude tests. Comparable testing in 1974 used SCAT and STEP general verbal and quantitative aptitude in conjunction with the content areas of reading, spelling, science, writing, English expression, social studies, computation, and basic concepts. Also, the later testing included specially prepared tests for creative writing and spelling as well as a series of reading tests which required the subjects to read short (McCall-Crabbs) passages and answer questions of both content and affective natures concerning the passages.

Both the 1969-70 and 1974-75 testings included the Virginia Affective Assessment Questionnaire (VAAQ), an instrument developed especially for the Needs Assessment Projects. The VAAQ is composed of four subscales which include self-concept, citizenship, school participation, and concept of self to others. This instrument was validated against a standardized personality questionnaire, teacher ratings, grade achievement, and empirical observations of the students. Further, its general predictive validity has recently been determined.

After the 1974-75 testing, it was possible to identify as a subgroup the students who had not achieved the grade level of their peers, i.e., these students were tested as seventh-graders in 1969-70 but had not attained twelfth-grade status in 1975. A second subgroup was composed of randomly selected twelfth-graders. There were 69 persons in each group.

CE 010 802

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

Analysis

Analyses of Variance were completed to determine if the behind-grade-level group differed from the group at-grade-level on measures of ability, achievement and attitude. Discriminant function analyses were also completed to use these measures to categorize membership in the two groups.

Results

Ability

The results of this analyis are presented in Table I and show that there were no significant differences in ability on either the SCAT verbal, SCAT quantitative, or SCAT total scores.

Achievement

The results of the analyses of variance for the 1969 SRA achievement battery are given in Table II. These results show that the group which was behind grade level had significantly lower scores (.05 level) in math, spelling, language, science, reading, social studies, and work-study skills.

The results of the analysis of variance for the 1974 STEP battery are given in Table III. These results show that the group which fell behind grade level had significantly lower scores (.05 level) in basic concepts, spelling, writing, English, and computation. There were no differences in reading, science and social studies.

In 1974, the students were administered a test composed of the McCall-Crabbs test passages in reading. The group behind-grade-level was significantly lower in reading comprehension (.05 level), as shown in Table IV.

The students were also asked to write a composition using a standardized stimulus. The group behind-grade-level wrote fewer total words (15% lower), fewer unique words (20% lower), misspelled 50% more total words, and misspelled 60% more unique words, all significant at the .05 level. These findings are shown in Table V. There were no differences in words per sentence and percentage of unique words, both of which are rough indicators of intelligence, and substantiate the similarity of the groups in general ability (Table VI).

Attitudes

The students were administered a multifaceted affective test in 1969 and 1974. In 1969, there were no differences between the groups in self-concept, attitudes toward school, interpersonal relations, or in the total scale. The group which was to fall behind grade level was stronger in citizenship (.05 level) as shown in Table VII.

In 1974, the group behind grade level was lower on citizenship and lower in interpersonal relations, self-esteem, and on the total scale (.05 level). They did not differ in attitudes toward school tasks. These findings are shown in Table VIII.

Discriminant Function Analysis

A discriminate function was run on 1969 data using the affective inventory and the achievement tests, to classify the students into either group. Together, the seven SRA subtests and four affective scales correctly assigned 55.6% of the subjects to their groups. Using SRA subtests only, 69.0% were correctly classified. Using the four affective scales, 61.1% were correctly assigned. Using 14 selected items from the affective inventory, 92.9% of the students were correctly classified. Eleven items which were present in both 1969 and 1974 editions of the scale correctly classified 85.1% in 1969, and 64.9% in 1974. The four subscales classified 65.2%; 15 selected items classified 72.5%. (Tables IX, X, and XI)

Conclusions

Though pupils who drop behind grade level did not differ in ability, they differed initially in the seventh grade in achievement from those who stayed on grade level. Initially, their attitudes were similar or stronger. By twelfth grade, their achievement scores were still lower, they showed marked difficiencies in writing performance and spelling, and their attitudes were generally poorer.

Table I

NEEDS ASSESSMENT COMPOSITIONS -- GRADE 12 FALL 04/16/76 PAGE 33

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE SCATV
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	87.4448	87.4448	.245	.622
WITHIN GROUPS	84	29993.4389	357.0647		
TOTAL	85	30080.8837			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	22	451.9545	14.3907	3.0681	422.0000	477.0000	445.5741 TO 458.3353
GRP 1	64	454.2656	20.1756	2.5220	415.0000	487.0000	449.2259 TO 459.3053
TOTAL	86	453.6744			415.0000	487.0000	
	UNGROUPED DATA		18.8120	2.0286			449.6411 TO 457.7077

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE SCATT
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	269.8162	269.8162	.842	.362
WITHIN GROUPS	83	26606.2309	320.5570		
TOTAL	84	26876.0471			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	22	457.0909	13.2410	2.8230	436.0000	479.0000	451.2202 TO 462.9616
GRP 1	63	461.1587	19.2288	2.4226	424.0000	496.0000	456.3160 TO 466.0015
TOTAL	85	460.1059			424.0000	496.0000	
	UNGROUPED DATA		17.8872	1.9401			456.2477 TO 463.9641

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE SCATQ
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	269.4482	269.4482	.608	.438
WITHIN GROUPS	84	37244.2727	443.3842		
TOTAL	85	37513.7209			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	22	463.8182	16.4914	3.5160	433.0000	496.0000	456.5063 TO 471.1300
GRP 1	64	467.8750	22.3724	2.7965	424.0000	507.0000	462.2865 TO 473.4635
TOTAL	86	466.8372			424.0000	507.0000	
	UNGROUPED DATA		21.0000	2.2654			462.3331 TO 471.3413

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE SRMATH
BY FGRCUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	14164.0444	14164.0444	17.826	.000
WITHIN GROUPS	122	96939.5927	794.5868		
TOTAL	123	111103.6371			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	60	19.5667	23.5914	3.0456	1.0000	99.0000	13.4724 TO 25.6610
GRP 1	64	40.9531	31.8984	3.9873	1.0000	99.0000	32.9852 TO 48.9211
TOTAL	124	30.6048			1.0000	99.0000	
		UNGROUPED DATA	30.0546	2.6990			25.2624 TO 35.9473

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE SPASPEL
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	19346.3041	19346.3041	19.684	.000
WITHIN GROUPS	123	120890.7679	982.8518		
TOTAL	124	140237.0720			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	60	32.6933	30.8399	3.9814	1.0000	95.0000	24.7165 TO 40.6501
GRP 1	65	57.5846	31.8139	3.9460	3.0000	98.0000	49.7015 TO 65.4677
TOTAL	125	45.6320			1.0000	98.0000	
		UNGROUPED DATA	33.6295	3.0079			39.6785 TO 51.5855

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE SRALA
BY FGRCUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	22429.1200	22429.1200	24.374	.000
WITHIN GROUPS	125	115024.6123	920.1969		
TOTAL	126	137453.7323			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	61	26.6885	27.3828	3.5060	1.0000	97.0000	19.6755 TO 33.7016
GRP 1	66	53.2879	32.8248	4.0405	1.0000	98.0000	45.2185 TO 61.3572
TOTAL	127	40.5118			1.0000	98.0000	
		UNGROUPED DATA	33.0288	2.9308			34.7118 TO 46.3118

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE SRASCI
BY FGRCUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	7383.2651	7383.2651	8.316	.005
WITHIN GROUPS	120	106544.2759	887.8690		
TOTAL	121	113927.5410			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	58	31.1724	28.5148	3.7442	1.0000	98.0000	23.6748 TO 38.6700
GRP 1	64	46.7500	30.9115	3.8639	1.0000	99.0000	39.0285 TO 54.4715
TOTAL	122	39.3443			1.0000	99.0000	
		UNGROUPED DATA	30.6847	2.7781			33.8444 TO 44.8442

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE SRAREAD
BY FGRCUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	13656.9108	13656.9108	15.185	.000
WITHIN GROUPS	123	110619.5372	899.3458		
TOTAL	124	124276.4480			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	60	30.8167	27.3759	3.5342	1.0000	99.0000	23.7447 TO 37.8886
GRP 1	65	51.7385	32.2109	3.9953	1.0000	99.0000	43.7570 TO 59.7199
TOTAL	125	41.6960			1.0000	99.0000	
		UNGROUPED DATA	31.6580	2.8316			36.0915 TO 47.3005

12

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE SRASS
BY FGRCUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	4119.9253	4119.9253	10.747	.001
WITHIN GROUPS	118	45235.8663	383.3548		
TOTAL	119	49355.7917			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	57	17.6316	16.0953	2.1319	1.0000	61.0000	13.3609 TO 21.9022
GRP 1	63	29.3651	22.2626	2.8048	1.0000	82.0000	23.7583 TO 34.9718
TOTAL	120	23.7917			1.0000	82.0000	
	UNGROUPED DATA	20.3655	1.8591				20.1104 TO 27.4729

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE SRANS
BY FGRCUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	5409.4538	5409.4538	19.094	.000
WITHIN GROUPS	122	34963.9333	283.3109		
TOTAL	123	39373.3871			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	60	12.0333	13.2869	1.7153	1.0000	55.0000	8.6010 TO 15.4657
GRP 1	64	25.2500	19.5781	2.4473	1.0000	69.0000	20.3595 TO 30.1405
TOTAL	124	18.8548			1.0000	69.0000	
		UNGROUPED DATA	18.0274	1.6189			15.6503 TO 22.0594

FILE NONAME (CREATION DATE = 04/16/75)

- O N E W A Y -

VARIABLE STCON
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	1463.0368	1463.0368	6.548	.012
WITHIN GROUPS	84	18768.3594	223.4328		
TOTAL	85	20231.3953			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	22	434.5000	12.5461	2.6748	408.0000	461.0000	428.9374 TO 440.0626
GRP 1	64	443.9531	15.6666	1.9583	417.0000	488.0000	440.0397 TO 447.8665
TOTAL	86	441.5349			408.0000	488.0000	
		UNGROUPED DATA	15.4278	1.6636			438.2272 TO 444.8426

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE STREAD
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	168.7270	168.7270	.576	.450
WITHIN GROUPS	80	23453.2242	293.1653		
TOTAL	81	23621.9512			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	20	455.4500	13.3672	2.9890	426.0000	476.0000	449.1940 TO 461.7060
GRP 1	62	458.7903	18.1335	2.3038	426.0000	487.0000	454.1853 TO 463.3954
TOTAL	82	457.9756			426.0000	487.0000	
	UNGROUPED DATA		17.0771	1.8859			454.2233 TO 461.7279

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE STSCI
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	281.3654	281.3654	1.440	.234
WITHIN GROUPS	79	15435.9926	195.3923		
TOTAL	80	15717.3580			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	20	438.3500	6.9682	1.5581	427.0000	453.0000	435.0888 TO 441.6112
GRP 1	61	442.6721	15.5528	1.9913	410.0000	470.0000	438.6889 TO 446.6554
TOTAL	81	441.6049			410.0000	470.0000	
		UNGROUPED DATA	14.0167	1.5574			438.5056 TO 444.7043

ILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE STSPEL
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	965.0693	965.0693	6.225	.015
WITHIN GROUPS	80	12402.8819	155.0360		
TOTAL	81	13367.9512			

ROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
RP 0	18	439.5556	12.4628	2.9375	420.0000	467.0000	433.3588 TO 445.7531
RP 1	64	447.8438	12.4483	1.5560	424.0000	470.0000	444.7343 TO 450.9532
OTAL	82	446.0244			420.0000	470.0000	
	UNGROUPED DATA		12.8467	1.4187			443.2017 TO 448.8471

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE STWRIT
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	1263.5000	1263.5000	4.295	.041
WITHIN GROUPS	79	23242.5000	294.2089		
TOTAL	80	24506.0000			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	18	450.8333	16.8009	3.7715	425.0000	470.0000	442.8763 TO 458.7904
GRP 1	63	460.3333	17.4550	2.1991	425.0000	491.0000	455.9373 TO 464.7293
TOTAL	81	458.2222			425.0000	491.0000	
	UNGROUPED DATA		17.5021	1.9447			454.3522 TO 462.8923

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE STSS
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	8727.3886	8727.3886	3.691	.058
WITHIN GROUPS	83	196238.1032	2364.3145		
TOTAL	84	204965.4118			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	22	421.5088	92.2387	19.6654	12.0000	464.0000	380.6037 TO 462.3963
GRP 1	63	444.6349	16.8344	2.1209	417.0000	484.0000	440.3952 TO 448.8746
TOTAL	85	438.6471			12.0000	484.0000	
		UNGROUPED DATA	49.3970	5.3579			427.9924 TO 449.3017

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE STENG
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	3082.6572	3082.6572	6.076	.016
WITHIN GROUPS	83	42107.3899	507.3180		
TOTAL	84	45190.0471			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	21	433.3810	31.0652	6.7790	310.0000	459.0000	419.2402 TO 447.5217
GRP 1	64	447.3438	19.0265	2.3783	408.0000	481.0000	442.5911 TO 452.0964
TOTAL	85	443.8941			310.0000	481.0000	
	UNGROUPED DATA		23.1943	2.5158			438.8912 TO 448.8970

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE STCOMP
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	11079.8498	11079.8498	4.247	.042
WITHIN GROUPS	86	224342.7237	2608.6363		
TOTAL	87	235421.7727			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	23	438.4783	94.5179	19.7083	4.0000	485.0000	389.6857 TO 471.3588
GRP 1	65	456.8154	20.8428	2.5852	421.0000	496.0000	450.8508 TO 461.1888
TOTAL	88	449.3409			4.0000	496.0000	
	UNGROUPED DATA	52.0192	5.5453				438.3191 TO 460.3627

Table IV

NEEDS ASSESSMENT COMPOSITIONS -- GRADE 12 FALL 04/16/76 PAGE 22

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE READING
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	8257.6799	8257.6799	29.083	0
WITHIN GROUPS	125	35492.1485	283.9372		
TOTAL	126	43749.8284			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	60	59.1667	18.0936	2.3359	20.3700	86.2967	54.4926 TO 63.8408
GRP 1	67	75.3184	15.6557	1.9127	34.4433	100.0000	71.4997 TO 79.1371
TOTAL	127	67.6877			20.3700	100.0000	
		UNGROUPED DATA	18.6339	1.6535			64.4155 TO 70.9599

Table V

NEEDS ASSESSMENT COMPOSITIONS -- GRADE 12 FALL 04/16/76 PAGE 44

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE TOTWDS
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	58262.9268	58262.9268	10.007	.002
WITHIN GROUPS	130	756887.7020	5822.2131		
TOTAL	131	815150.6288			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	65	194.7231	85.9734	10.6637	0	453.0000	173.4199 TO 216.0262
GRP 1	67	236.7463	65.5786	8.0117	66.0000	423.0000	220.7504 TO 252.7422
TOTAL	132	216.0530			0	453.0000	
	UNGROUPED DATA	78.0838	6.8659				202.4707 TO 229.6354

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE UNDS
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	17694.6261	17694.6261	14.869	.000
WITHIN GROUPS	130	154706.8891	1190.0530		
TOTAL	131	172401.5152			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	65	102.1846	38.0969	4.7253	0	205.0000	92.7447 TO 111.6246
GRP 1	67	125.3433	30.6048	3.7390	43.0000	202.0000	117.8782 TO 132.8084
TOTAL	132	113.9394			0	205.0000	
		UNGROUPED DATA	36.2773	3.1575			107.6938 TO 120.1857

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE PTMIS
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	23.9752	23.9752	4.187	.043
WITHIN GROUPS	130	744.3885	5.7261		
TOTAL	131	768.3637			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	65	2.8015	2.7819	.3451	0	11.1111	2.1122 TO 3.4908
GRP 1	67	1.9498	1.9427	.2373	0	12.1212	1.4752 TO 2.4229
TOTAL	132	2.3688			0	12.1212	
		UNGROUPED DATA	2.4219	.2108			1.9518 TO 2.7858

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE PUMIS
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	90.2238	90.2238	7.915	.006
WITHIN GROUPS	130	1481.7982	11.3984		
TOTAL	131	1572.0221			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	65	4.4957	4.3169	.4982	0	14.5695	3.5004 TO 5.4911
GRP 1	67	2.8428	2.6086	.3187	0	16.2791	2.2057 TO 3.4783
TOTAL	132	3.6564			0	16.2791	
	UNGROUPED DATA		3.4641	.3015			3.0599 TO 4.2528

Table VI

NEEDS ASSESSMENT COMPOSITIONS -- GRADE 12 FALL 04/16/76 PAGE 46

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE PUNOS
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	12.2214	12.2214	.138	.711
WITHIN GROUPS	130	11548.2637	88.8328		
TOTAL	131	11560.4851			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	65	54.5308	11.7917	1.4626	0	87.5000	51.6178 TO 57.4687
GRP 1	67	53.9302	6.3358	.7748	37.8472	72.8155	52.3848 TO 55.4756
TOTAL	132	54.2299			0	87.5000	
	UNGROUPED DATA	9.3948	.8176				52.6124 TO 55.8474

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE WPS
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	26.6837	26.6837	.764	.384
WITHIN GROUPS	130	4525.2246	34.8094		
TOTAL	131	4551.8283			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	65	16.4239	7.0700	.8769	0	58.0000	14.6720 TO 18.1757
GRP 1	67	15.5259	4.4826	.5476	7.9231	36.6667	14.4325 TO 16.6193
TOTAL	132	15.9681			0	58.0000	
		UNGROUPED DATA	5.8946	.5131			14.9531 TO 16.9830

Table VII

NEEDS ASSESSMENT COMPOSITIONS -- GRADE 12 FALL 04/16/76 PAGE 27

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE OSCORE1
BY FGRCUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	289.5706	289.5706	5.020	.029
WITHIN GROUPS	52	2999.6331	57.6853		
TOTAL	53	3289.2037			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	25	31.9200	8.3712	1.6742	21.0000	56.0000	28.4645 TO 35.3755
GRP 1	29	27.2759	6.8603	1.2739	14.0000	41.0000	24.6663 TO 29.8854
TOTAL	54	29.4259			14.0000	56.0000	
	UNGROUPED DATA		7.8778	1.0720			27.2757 TO 31.5762

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE CSCORE2
BY FGRCUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	288.3678	288.3678	3.467	.068
WITHIN GROUPS	52	4324.9655	83.1724		
TOTAL	53	4613.3333			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	25	54.6800	7.5554	1.5111	41.0000	71.0000	51.4813 TO 57.7187
GRP 1	29	49.9655	10.2730	1.9076	30.0000	70.0000	46.0579 TO 53.8732
TOTAL	54	52.1111			30.0000	71.0000	
	UNGROUPED DATA		9.3297	1.2696			49.5646 TO 54.6576

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE OSCORE3
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	6.0331	6.0331	.205	.653
WITHIN GROUPS	52	1533.9669	29.4994		
TOTAL	53	1540.0000			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	25	35.3600	5.8014	1.1603	22.0000	48.0000	32.9653 TO 37.7547
GRP 1	29	34.6897	5.0927	.9457	25.0000	44.0000	32.7525 TO 36.6268
TOTAL	54	35.0000			22.0000	48.0000	
		UNGROUPED DATA	5.3904	.7335			33.5287 TO 36.4713

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE CSCORE4
BY FGRCUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	18.3679	18.3679	.271	.605
WITHIN GROUPS	52	3520.4469	67.7009		
TOTAL	53	3538.8148			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN			
GRP 0	25	36.4800	8.5884	1.7177	21.0000	54.0000	32.9349	TO	40.0251	C
GRP 1	29	35.3103	7.9062	1.4681	20.0000	53.0000	32.3030	TO	38.3177	C
TOTAL	54	35.8519			20.0000	54.0000				
	UNGROUPED DATA		8.1713	1.1120			33.6215	TO	38.0822	

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE CTOTAL
BY FGRCUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	1659.7630	1659.7630	3.223	.078
WITHIN GROUPS	52	26777.0703	514.9437		
TOTAL	53	28436.8333			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	25	158.3600	20.2523	4.0505	118.0000	198.0000	150.0003 TO 166.7197
GRP 1	29	147.2414	24.5919	4.5666	99.0000	189.0000	137.8871 TO 156.5956
TOTAL	54	152.3889			99.0000	198.0000	
		UNGROUPED DATA	23.1634	3.1521			146.0665 TO 158.7113

Table VIII

NEEDS ASSESSMENT COMPOSITIONS -- GRADE 12 FALL 04/16/76 PAGE 28

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE SUBSC1
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	214.9823	214.9823	4.020	.047
WITHIN GROUPS	133	7111.9511	53.4733		
TOTAL	134	7326.9333			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	67	44.3731	7.2735	.8886	25.0000	57.0000	42.5998 TO 46.1473
GRP 1	68	46.8971	7.3508	.8914	27.0000	62.0000	45.1178 TO 48.6763
TOTAL	135	45.6444			25.0000	62.0000	
	UNGROUPED DATA		7.3945	.6364			44.3857 TO 46.9032

35

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE SUBSC2
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	251.5669	251.5669	2.594	.110
WITHIN GROUPS	133	12899.7368	96.9905		
TOTAL	134	13151.3037			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	67	73.3433	10.4469	1.2763	48.0000	106.0000	70.7951 TO 75.8915
GRP 1	68	76.0735	9.2209	1.1182	48.0000	96.0000	73.8416 TO 78.3055
TOTAL	135	74.7185			48.0000	106.0000	
UNGROUPED DATA			9.9868	.8526			73.8321 TO 76.4849

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE SUBSC3
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	340.6118	340.6118	9.313	.003
WITHIN GROUPS	133	4864.4697	36.5750		
TOTAL	134	5205.0815			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	67	57.9701	6.7644	.8264	33.0000	70.0000	56.3202 TO 59.6201
GRP 1	68	61.1471	5.2469	.6363	47.0000	71.0000	59.8770 TO 62.4171
TOTAL	135	59.5704			33.0000	71.0000	
	UNGROUPED DATA		6.2325	.5364			58.5095 TO 60.6313

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE SUBSC4 Self-Esteem
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	544.9596	544.9596	14.699	.000
WITHIN GROUPS	133	4930.9219	37.0746		
TOTAL	134	5475.8815			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	67	51.7463	6.7495	.8246	28.0000	66.0000	50.0999 TO 53.3926
GRP 1	68	55.7647	5.3591	.6499	40.0000	69.0000	54.4675 TO 57.0619
TOTAL	135	53.7704			28.0000	69.0000	
		UNGROUPED DATA	6.3926	.5502			52.6822 TO 54.8585

FILE NONAME (CREATION DATE = 04/16/76)

- O N E W A Y -

VARIABLE TOTAL
BY FGROUP

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB.
BETWEEN GROUPS	1	5230.6416	5230.6416	8.846	.003
WITHIN GROUPS	133	78645.5066	591.3196		
TOTAL	134	83876.1481			

GROUP	COUNT	MEAN	STANDARD DEVIATION	STANDARD ERROR	MINIMUM	MAXIMUM	95 PCT CONF INT FOR MEAN
GRP 0	67	227.4328	25.2762	3.0880	135.0000	292.0000	221.2675 TO 233.5982
GRP 1	68	239.0824	23.3337	2.8296	172.0000	284.0000	234.2344 TO 245.5303
TOTAL	135	233.7037			135.0000	292.0000	
		UNGROUPED DATA	25.0188	2.1533			229.4449 TO 237.9625

Table IX

NEEDS ASSESSMENT COMPOSITIONS -- GRADE 12 FALL 04/16/76 PAGE 10

CENTROIDS OF GROUPS IN REDUCED SPACE

GROUP 1 .48414
GROUP 2 -.42362

PREDICTION RESULTS -

ACTUAL GROUP NAME	CODE	N OF CASES	PREDICTED GROUP MEMBERSHIP GROUP 1	GROUP 2
GROUP 1	2	21	13. 28.9 PCT	8. 17.8 PCT
GROUP 2	3	24	12. 26.7 PCT	12. 26.7 PCT

55.6 PERCENT OF KNOWN CASES CORRECTLY CLASSIFIED

CHI-SQUARE = .556 SIGNIFICANCE = .456

PREDICTION RESULTS -

ACTUAL GROUP NAME	CODE	N OF CASES	PREDICTED GROUP MEMBERSHIP GROUP 1	GROUP 2
GROUP 1	2	55	41. 36.3 PCT	14. 12.4 PCT
GROUP 2	3	58	21. 18.6 PCT	37. 32.7 PCT

69.0 PERCENT OF KNOWN CASES CORRECTLY CLASSIFIED

CHI-SQUARE = 16.363 SIGNIFICANCE = .000

PREDICTION RESULTS -

ACTUAL GROUP NAME	CODE	N OF CASES	PREDICTED GROUP MEMBERSHIP GROUP 1	GROUP 2
GROUP 1	2	25	14. 25.9 PCT	11. 20.4 PCT
GROUP 2	3	29	10. 18.5 PCT	19. 35.2 PCT

61.1 PERCENT OF KNOWN CASES CORRECTLY CLASSIFIED

CHI-SQUARE = 2.667 SIGNIFICANCE = .102

Table X

NEEDS ASSESSMENT COMPOSITIONS -- GRADE 12 FALL 04/16/76 PAGE 18

CENTROIDS OF GROUPS IN REDUCED SPACE

GROUP 1 -.90491
GROUP 2 .73089

PREDICTION RESULTS -

ACTUAL GROUP NAME	CODE	N OF CASES	PREDICTED GROUP MEMBERSHIP GROUP 1	GROUP 2
GROUP 1	2	21	18. 38.3 PCT	3. 6.4 PCT
GROUP 2	3	26	4. 8.5 PCT	22. 46.8 PCT

85.1 PERCENT OF KNOWN CASES CORRECTLY CLASSIFIED

CHI-SQUARE = 23.170 SIGNIFICANCE = .000

CENTROIDS OF GROUPS IN REDUCED SPACE

GROUP 1 .48351
GROUP 2 -.42818

PREDICTION RESULTS -

ACTUAL GROUP NAME	CODE	N OF CASES	PREDICTED GROUP MEMBERSHIP GROUP 1	GROUP 2
GROUP 1	2	53	34. 29.8 PCT	19. 16.7 PCT
GROUP 2	3	61	21. 18.4 PCT	40. 35.1 PCT

64.9 PERCENT OF KNOWN CASES CORRECTLY CLASSIFIED

CHI-SQUARE = 10.140 SIGNIFICANCE = .001

TABLE XI

NEEDS ASSESSMENT COMPOSITIONS -- GRADE 12 FALL

PREDICTION RESULTS

ACTUAL GROUP NAME	CODE	N OF CASES	PREDICTED GROUP MEMBERSHIP GROUP 1	GROUP 2
GROUP 1	2	67	42. 31.1 PCT	25. 18.5 PCT
GROUP 2	3	68	22. 16.3 PCT	46. 34.1 PCT

65.2 PERCENT OF KNOWN CASES CORRECTLY CLASSIFIED

CHI-SQUARE = 12.452 SIGNIFICANCE = .000

ACTUAL GROUP NAME	CODE	N OF CASES	PREDICTED GROUP MEMBERSHIP GROUP 1	GROUP 2
GROUP 1	2	59	39. 32.5 PCT	20. 16.7 PCT
GROUP 2	3	61	13. 10.8 PCT	48. 40.0 PCT

72.5 PERCENT OF KNOWN CASES CORRECTLY CLASSIFIED

CHI-SQUARE = 24.300 SIGNIFICANCE = .000